GUIDE FOR LIGHTHOUSE VOLUNTEERS

This guide is intended to provide the volunteer who will meet visitors to the Lighthouse [illegible] some suggestions which are intended to be helpful in accomplishing some of the [illegible] outcomes for a visit to the Cape Mendocino Lighthouse.

Every visitor should be greeted with courteous warmth and enthusiasm. The Society welcomes visitors to the Lighthouse and hopes they will leave with more information than what they had when they arrived, and that they leave with a positive feeling toward the project. It is even hoped that this introduction might motivate some of them to become involved in the Society's activities.

An example of how an initial contact might be made follows:

> "Good morning/afternoon! On behalf of the Lighthouse Society, I would like to welcome you to the Cape Mendocino Lighthouse. My name is _____ and I will be happy to answer any questions you may have about the Lighthouse. There is just one request I have to make of you, that is, before you leave, please be sure to sign our guest book. Now then, what would you like to know about the Lighthouse?

Keep in mind that there is no such thing as a "dumb" question, and there is nothing wrong with answering a question with "I don't know." However, the important follow-up to an "I don't know" answer should be, "but I can find out and if you give me your name and address, I'll let you know." A volunteer cannot be expected to know everything, and an acknowledgement of a lack of information is better than an effort to "fake it."

After a preliminary introduction inside, weather permitting, walk the visitors outside to note various architectural and structural features. Particular notice should be taken of the balconies, the lantern room, the shape of the roof, the ball, the missing hand grips on the lantern room windows, the original method of numbering the pieces for assembly, etc. While outside, it might be appropriate to mention how the archaeological requirements for the development of the site were met and the importance of the contributions of the BLM.

After the look outside, return to the inside for further explanation and your concluding remarks, which should include an additional reminder about the guest book.

When on duty at the Lighthouse be sure to dress comfortably. It gets quite cool inside, even on the warmest days. In cool weather, it can get down right cold. There is no uniform or dress code for volunteers, however, you are urged to keep in mind you are the Society's representative to the public and an appropriate appearance is appreciated.

Also keep in mind that your time as a volunteer is a valuable resource and try to use it as efficiently as possible. Try to keep aware of where visitors are in terms of arrival, perhaps one party may be delayed for a moment or two in order to combine it with a second one. A

What Makes the Cape Mendocino Lighthouse Unique?

There are two characteristics of the Cape Mendocino Lighthouse which make it unique among the approximately 40 lighthouses established along the coastline of California. These characteristics are only shared with its almost "twin," the Point Reyes Lighthouse. Both were constructed by the same contractor at approximately the same time. The Cape Mendocino tower was installed and in operation two years before Point Reyes. Both of these lighthouses were essentially all-metal and both were prefabricated.

In the mid-nineteenth century wood, stone, brick and concrete were the most commonly used materials in construction. Metal, specifically iron, was just gaining a foothold as a material superior to these others. Iron, both cast iron and forged iron, make-up most of the parts and pieces in this lighthouse. Steel was not used for such large scale construction purposes until late in the century when the cost of production was substantially reduced. Of the 40-some lighthouses along the coast, metal is prominent in only five others and none of these was all-metal.

Although the technique of prefabrication was well known and widely used in a variety of other construction applications, it was not used in any of the lighthouses along the California coast. With the exception of Point Reyes and Cape Mendocino, all of the other structures were custom built, including, in most cases the lantern rooms.

Apparently the contractor responsible for the construction of this lighthouse, Joseph Bein, was able to persuade the Lighthouse Board to accept this innovative approach to the construction. The tower was not so much built as it was assembled. The use of iron permitted the tower to resist the rigours of the prevailing winds around Cape Mendocino as well as the gusts accompanying storms and gales.

PRE-EUROPEAN/AMERICAN OCCUPANTS

Before the coming of European-Americans to Shelter Cove in the 19th century, the area was inhabited by Native Americans (or Indians) of the Wailaki group, identified as the Shelter Cove Sinkyone. Archeaologists estimate these people arrived in the area about 1000 years ago. They were hunters and gatherers who probably lived in permanent villages within upper Mattole and South Fork watersheds. The habitation sites along the coast were seasonal, occupied in spring and summer. Coastal sites were general adjacent to water sources, streams or springs. When in residence they gathered both shellfish and edible seaweeds. The primary food sources were mussels, chitons, barnacles, limpets and snails. These were collected and cooked, either by boiling or broiling. Curiously, there is no evidence that the Shelter Cove Sinkyone collected the abalone which is so abundant.

Mal Coombs Park is located on one of the largest of these seasonal habitation sites. The blackening of the soil is caused by the ashes from the campfires which burned here for the hundreds of years when the Sinkyone came to stay along the coast. The soil is also littered with shell remnants left over from their processing of the shellfish collected. There are a number of other habitation sites located in the area which seems to suggest that when the food supply at one location had been depleted, the group would move to another place.

In the years following the acquisition of California by the United States and the subsequent discovery of gold in various parts of the state, the Shelter Cove Sinkyone were virtually exterminated. Any survivors of the years of hostilities were confined to a reservation in Mendocino County, unless, under the provisions of the Act for the Government and Protection of Indians, adopted by the California legislature in 1850, they had been made involuntary indentured servants. By the spring of 1864 a scouting party from the Second California Volunteer Infantry was able to report that between Fort Bragg and the mouth of the Mattole River there were no "Indians signs whatever."

THE COMPASS ROSE

The concrete work in the landscaping surrounding the lighthouse is laid out in the form of a partial compass rose. The four main points indicate the primary directions, and the secondary points locate the intermediate directions (north-east, south-east, south-west, and north-west). Thus the lighthouse design is only one-quarter of a complete compass rose, which has 32 points.

The compass rose first appeared on nautical charts and terrestrial maps in the 1300's. The term "rose" came to be applied to the figure depicted because it was thought the points resembled the petals of the flower. Originally the rose was to indicate the directions of the winds, and initially it was called a wind rose. In the Mediterranean, where the device first appeared, there were eight major winds, coming from the eight points of the compass, the same eight around the lighthouse.

THE FRESNEL LENS

Name after its inventor, Augustin Fresnel, French physicist (hence the French pronunciation, with the "e" pronounced "a" and the silent "s", Fraynel) became the lens of choice for lighthouses along the seacoasts of Europe and North America in the nineteenth century. Fresnel released his design in 1822 and it was quickly adopted by most developed nations except the United States. Here, the new design was dismissed as a fad by Stephen Pleasonton, head of the Lighthouse Board. Consequently, application of Fresnel's invention to U.S. lighthouses was delayed until the 1850's.

A Fresnel lens consisted of concentric rings of glass prisms aligned above and below the light source. As light entered the prisms it was bent and directed toward a center point, each reflection concentrating it. The center of the lens was shaped like a magnifying glass which cast the concentrated beam outward. Increasing the number of rings of prisms increased the concentration of the beam of light. Increased rings also increased the size of the lens. Seven standardized sizes (called "orders") eventually were developed. The three largest, and most powerful, first, second, and third orders, were intended for coastal lighthouses.

HEIGHTH OF CALIFORNIA LIGHTHOUSES

Over 40 lighthouses were constructed in California. Only four had towers over 100 feet in height, Point Arena (115), Pigeon Point (115), Piedras Blancas (115), and St. George Reef (146). These are the only ones which feature the "classic" lighthouse form. These were also located at critical coastal locations on relatively low-lying sites and had to be built tall to improve visibility.

The rest were of two types, those to aid in navigation in and around harbors, and those to protect mariners along coastlines where natural terraine provided the elevation needed for visibility. As a result, the typical California lighthouse was not as tall as its counterparts on other coastlines. Most were less than 40-feet tall.